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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/359,527	07/22/1999	PETER G. WEBB	10990641-1	2940

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EXAMINER

MARSCHER, ARDIN H

ART UNIT

PAPER NUMBER

1631

DATE MAILED: 01/16/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/359,527

Applicant(s)

WEBB ET AL.

Examiner

Ardin Marschel

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 06 October 2003.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 2-6, 8-14, 17, 49-52 and 55-57 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 50-52 is/are allowed.
- 6) ☒ Claim(s) 2-6, 8, 10-14, 17, 49, 56 and 57 is/are rejected.
- 7) ☒ Claim(s) 9 and 55 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. §§ 119 and 120

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☐ All b) ☐ Some \* c) ☐ None of:  
1. ☐ Certified copies of the priority documents have been received.  
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).  
\* See the attached detailed Office action for a list of the certified copies not received.
- 13) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application) since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.  
a) ☐ The translation of the foreign language provisional application has been received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121 since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_\_
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) \_\_\_\_\_ 6) ☐ Other:

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### DETAILED ACTION

The Petition decision which has Granted a Withdrawl from issue of the instant application, mailed 10/10/03, is acknowledged.

A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after allowance or after an Office action under *Ex Parte Quayle*, 25 USPQ 74, 453 O.G. 213 (Comm'r Pat. 1935). Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, prosecution in this application has been reopened pursuant to 37 CFR 1.114. Applicant's submission filed on 10/6/03 has been entered.

Applicants' IDS, filed 10/6/03, have been fully considered with the following results. The following rejections and/or objections are newly applied. They constitute the complete set presently being applied to the instant application.

### VAGUENESS AND INDEFINITENESS

Claim 6 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 6 conflicts with claim 10 from which it depends because claim 10 clearly obtains a target drive pattern for use in deposition whereas claim 6 confusingly requires that an actual drive pattern is derived without obtaining such a target drive pattern. It is unclear what is meant in claim 6 when it depends from claim 10 which detects error

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compared to the target drive pattern in part (b). Clarification via clearer claim wording is requested.

### **PRIOR ART**

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

Claims 2-5, 8, 10-14, 17, 49, 56, and 57 are rejected under 35 U.S.C. 103(a) as being unpatentable over Southern (WO 89/10977), taken in view of Weber et al. (P/N 4,328,504).

Southern describes the fabrication of an addressable array of nucleic acid biopolymers as well as its use for hybridization assays in the document taken as a whole, or as summarized in the abstract. Array fabrication is set forth on pages 2-4 generally and with specifics on page 11, line 9, through page 17, line 7. In particular the fabrication is optionally set forth on page 11, lines 9-18, as being a computer-controlled printing device which lays down nucleic acid precursors. The sentence which bridges pages 11 and 12 of the reference specifically cites ink-jet printer practice for this

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fabrication process. EXAMPLE 5 on page 20-21 is also directed to plotter deposition of nucleic acids to fabricate such an array. This is the basic methodology of the instantly claimed invention, but without analysis of errors that may occur during deposition of materials in the printing process.

Weber et al. is directed to printing error correction via imaging printed material deposition with corrective action applied to the ink jet deposition apparatus so that the actual deposition pattern is what is desired rather than containing errors as summarized in the abstract and is also a basic element of the instantly claimed invention. Weber et al. motivates the error correction practices disclosed therein due to pointing to ink-jet printing errors that were known as summarized in column 1, lines 5-33, and more specifically in column 2, line 42, through column 3, line 2. In column 4, line 30, through column 8, line 42, several deposition errors are optically sensed and corrected for via the sending of controller signals to the deposition ink-jet head and its associated driving mechanisms.

Thus, it would have been obvious to someone of ordinary skill in the art at the time of the instant invention to prepare arrays as in Southern and be aware of ink-jet problems of deposition as summarized in Weber et al. thus being motivated to correct the errors with driving mechanism signals thus resulting in the practice of the instant invention. A multiple nozzle print head is also described in Weber et al. in column 6, lines 11-25, as required in instant claim 17.

### **CLAIM OBJECTIONS**

Claims 9 and 55 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

### **INFORMATION DISCLOSURE STATEMENT**

On the enclosed PTO Form 1449 several foreign patent documents have been lined through as not having been considered due to a lack of a copy of each of these documents. The file for the instant application has been thoroughly reviewed for these copies but they have not been found as associated with the instant file. If applicants wish to have these documents considered, they are requested to file another PTO form 1449 with a copy of each document that applicants wish to have considered.

### **COMMENTS ON GANZ ET AL. (P/N 6,558,623)**

Ganz et al. may support an Interference proceedings. This document will be reviewed as supporting a potential interference after resolution of the above issues.

Claims 50-52 are allowed.

Papers related to this application may be submitted to Technical Center 1600 by facsimile transmission. Papers should be faxed to Technical Center 1600 via the Central PTO Fax Center. The faxing of such papers must conform with the notices published in the Official Gazette, 1096 OG 30 (November 15, 1988), 1156 OG 61 (November 16, 1993), and 1157 OG 94 (December 28, 1993)(See 37 CFR § 1.6(d)). The Central PTO Fax Center number is (703) 872-9306.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ardin Marschel, Ph.D., whose telephone number is (703)308-3894. The examiner can normally be reached on Monday-Friday from 8 A.M. to 4 P.M.

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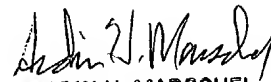
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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Michael Woodward, Ph.D., can be reached on (703)308-4028.

Any inquiry of a general nature or relating to the status of this application should be directed to Legal Instrument Examiner, Tina Plunkett, whose telephone number is (703)305-3524 or to the Technical Center receptionist whose telephone number is (703) 308-0196.

January 9, 2004

  
ARDIN H. MARSCHEL  
PRIMARY EXAMINER